

NASA Case No. KSC-12490

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Jesus A. Dominguez)
Serial No.: Unknown)
Filed: Herewith)
Title: Optimal Binarization of)
Gray-Scaled Digital Images Via)
Fuzzy Reasoning)

Mail Stop Patent Applications
Attn: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to the requirements of 37 CFR 1.97 and 1.98, applicants hereby request that the references listed in the attached form PTO-1449 be considered and made of record in the above-identified application.

Respectfully Submitted,



Randall M. Heald
Attorney for Applicant
Registration No. 28,561

Date: Feb 11, 2004

Mailing Address:
NASA, John F. Kennedy Space Center
Mail Code: CC-A
Kennedy Space Center, FL 32899
Telephone No.: (321) 867-7214

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 2**Complete if Known**

Application Number	Unknown
Filing Date	Herewith
First Named Inventor	Jesus Dominguez
Art Unit	
Examiner Name	
Attorney Docket Number	KSC-12490

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA	US- 6,347,153	02-12-2002	Triplett et al.	
	AB	US- 6,285,801	09-04-2001	Mancuso et al.	
	AC	US- 6,094,508	07-25-2000	Acharya et al.	
	AD	US- 5,870,495	02-09-1999	Mancuso et al.	
	AE	US- 5,799,111	08-25-1998	Guissin	
	AF	US- 5,761,326	06-02-1998	Brady et al.	
	AG	US- 5,754,709	05-19-1998	Moriya et al.	
	AH	US- 5,651,077	07-22-1997	Dong et al.	
	AI	US- 5,590,220	12-31-1996	Takahashi	
	AJ	US- 5,481,620	01-02-1996	Vaidyanathan	
	AK	US- 5,442,462	08-15-1995	Guissin	
	AL	US- 5,434,927	07-18-1995	Brady et al.	
	AM	US- 5,377,020	12-24-1994	Smitt	
	AN	US- 5,179,599	01-12-1993	Formanek	
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND

TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	Unknown
Filing Date	Herewith
First Named Inventor	Jesus Dominguez
Art Unit	
Examiner Name	
Attorney Docket Number	KSC-12490

Sheet 2 of 2

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	BA	DOMINGUEZ, JESUS, et al., Implementation of a General Real-Time Visual Anomaly Detection System via Fuzzy Reasoning and Neural-Generic Network,	
		The 10th IEEE Conference on Fuzzy Systems, The University of Melbourne, Australia, Dec. 2-5, 2001	
	BB	CHANG, YAN et al., Comparison of Five Conditional Probabilities in 2-level Image Thresholding Based on Bayesian Formulation, The University of Sydney, Australia, pp. 1-6	
	BC	PAPAMARKOS, NIKOS, A Technique for Fuzzy Document Binarization, Dept. of Electrical and Computer Engineering, Democritus University of Thrace, 67100 Xanthi, Greece, p. 152-156	
	BD	HUANG, LIANG-KAI, et al., Image Thresholding By Minimizing the Measures of Fuzziness, Pattern Recognition, Vol. 28, No. 1, pp. 41-51 (1995)	
	BE	OTSU, N., A Threshold Selection Method From Gray-Level Histograms, IEEE Transactions on Systems, Man, and Cybernetics, Vol. 9, No. 1, pp. 62-66 (1979)	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.